

Before the
Federal Communications Commission

Washington, D.C. 20554

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In re Petition of:

Octatron, Inc. and Chang Industry, Inc.

For Waiver of Sections 15.247(b),
15.247(e), and 15.249(a) of the Rules
and Regulations

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File No.

Federal Communications Commission
Office of Secretary

To: Marlene H. Dorch, Secretary

For transmission to: Bruce Franca, Acting
Chief of the Office of Engineering
and Technology

REQUEST FOR WAIVER

1. Octatron, Inc. and Chang Industry, Inc. ("Petitioners"), by their attorneys, hereby submit their request for waiver of Sections 15.247(b), 15.247(e), and 15.249(a) of the Federal Communications Commission's ("FCC" or "Commission") rules and regulations.¹ Waiver of these rules will serve the public interest by allowing for the use of two surveillance systems that will greatly improve the capabilities of law enforcement, as well as government security and counter-terrorism services. The systems provide live video and audio surveillance of locations that are difficult or impossible to directly observe. The systems offer tactical advantages and reduce the danger to life, while gathering information in small, hazardous and confined areas, such as in buildings, caves, tunnels, alleys, behind walls and windows, and through rooftops, making it well-suited to counter-terrorism and law enforcement operations in a wide variety of locations, including wilderness, rural, and urban areas. The petitioners provided demonstrations to law enforcement agencies, resulting in strong endorsements by those agencies.

DEVICE DESCRIPTION AND NEED FOR WAIVER

2. The two systems for which waivers are requested are the Dragon Egg™ System and the Pole Camera System (hereinafter, collectively, the "Surveillance Systems"). The Dragon Egg™ System is an imaging system that will provide live color or black and white video of a 360-degree field of view without the need to pan or tilt. The imaging sensor, a small egg-shaped device, can be thrown or tossed to a remote or confined and potentially hazardous location to obtain video images and sound from the surrounding

¹ 47 C.F.R. §§ 15.247(b), 15.247(e), and 15.249(a).

perimeter. The device is intended for counter-terrorism and law enforcement operations in urban, rural, and wilderness terrain, as well as in police activities requiring observation and surveillance.

2. The Pole Camera System expands on the capabilities of the Dragon Egg™ System. It is comprised of a sturdy extendable pole with a camera mount. The camera has an integrated IR illuminator. The pole components to which the camera is mounted are a short pole extending 2-4 feet and a long pole extending 4-16 feet. The Pole Camera System can be used to investigate attics, crawl spaces, around corners, under vehicles, or high places.

3. Both Surveillance Systems will operate at 902-928 MHz with 1W for transmitting the video and audio to the receiver. The Surveillance Systems utilize analog transmissions. If they were, however, digital devices, no waiver would be required. Accordingly, the requested waiver is that the power limit permitted for digital modulation contained in §15.247(b)(3) of the Commission's rules be applied to these devices, notwithstanding that the devices operate in analog mode. Analog is greatly favored over digital modulation for the Surveillance Systems because digital modulation would require more power within the devices, which would result in reduced battery life or increased battery size in the remote unit for the Dragon Egg™ System and the mounted camera in the Pole Camera System. These consequences would diminish the value of the device by either limiting the time during which law enforcement would be able to conduct an operation or requiring law enforcement personnel to carry a larger, more cumbersome device, which may be difficult to toss or throw in certain environments. Analog modulation is also favored because with digital modulation, as the signal gets weaker or there is increased interference, there is little effect on picture quality until suddenly there is a complete failure of the picture, greatly impaired imagery, or delayed images, all of which could mislead the operator, who is potentially working under very adverse conditions. On the other hand, analog reduction in the signal or increases in interference result in a gradual degradation of the image, which gives the operator warning that the signal is weakening and therefore poses a much lower risk of misleading the operator of the device that the risk of video loss is not imminent.

4. Section 15.247(e) of the Rules sets forth a spectral density limit for a digital intentional radiator. Specifically, such emitters are limited to no more than 8dBm (6.3 mW) in any 3 kHz band during any time interval of continuous transmission. The relevant power level is to be determined in accordance with subsection (b) of 15.247. Since the Petitioners are requesting a waiver of 15.247(b)(3) to permit analog operation under this section at the power levels permitted to digital devices, as a corollary, a request must also be made for waiver of the application of the spectral density requirement in subsection (e) to the analog modulation that will be created by the devices and the Petitioners make that request.

5. The transmission plans for these Surveillance Systems do not conform to the power limitation at §15.249(a) of the Commission's rules. Therefore, a waiver of that

rule is also required for the production of the devices.

6. Although the Surveillance Systems will exceed the applicable Part 15 limits for analog devices, it will not create significant interference. Furthermore, any such interference will be limited to the immediate area of emergency, temporary operations or to defined training areas and will serve the higher public interest objectives of safety to life and improve security. Moreover, the potential for disruption will be of limited duration and is unlikely to recur in the same area or location.

8. All intentional radiators operating under Part 15 of the Commission's rules must be certificated by the Commission pursuant to the procedures set forth in subpart J of the part 2 of the Commission's rules. The Petitioners will not be able to certify on FCC Form 731 that the Surveillance Systems meet the emission limits under Part 15 and, therefore, the Petitioner seeks waiver by the FCC of certain rules.

WAIVER REQUEST AND JUSTIFICATION

9. The Petitioners request that the Commission provide a waiver of the emission limit in 47 C.F.R. § 15.249(a), the emission type in 47 C.F.R. § 15.247(b)(3), and the spectral density requirement of 47 C.F.R. § 15.247(e) to permit the manufacture and sale of the Surveillance Systems. The units will be tested and certified to comply with the other applicable sections of Part 15, including all other emission limits.

10. Section 1.925 of the Commission's rules provides that the Commission may waive its rules if the petitioner has shown:

The underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or

In view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.²

11. The Commission has discretion to waive a rule "where particular facts would make strict compliance inconsistent with the public interest."³ The Commission may grant a waiver when the relief requested in that particular case does not undermine the policy objectives of the rule and such waiver serves the public interest.⁴ A "[w]aiver is appropriate only if special circumstances warrant a deviation from the general rule and

² 47 C.F.R. § 1.925(b)(3).

³ *Northeast Cellular Telephone, Co. L.P. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990) ("Northeast"). See also *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969, rehearing denied, 459 F.2d 1203 (D.C. Cir. 1972), cert denied 409 U.S. 1027 (hereinafter "WAIT").

⁴ *WAIT*, 418 F.2d at 1157.

such deviation would better serve the public interest.”⁵ The Commission, therefore, has flexibility in deciding whether to grant a waiver and each waiver must be considered based upon the circumstances unique to that case.

12. The waiver requested herein presents the Commission with a unique set of circumstances where the higher public interest in preserving life and combating crime and terrorism can be more effectively realized through the waiver of three of its rules under Part 15. Significant underlying purposes of the Commission’s mandate are for “national defense” and “for promoting safety of life and property through the use of wire and radio communication.”⁶ Waiver of the Sections 15.247(b), 15.247(e), and 15.249(a) can further these objectives with minimal impact on other devices regulated under Part 15 of the Commission’s rules and regulations.

13. In any given jurisdiction, the Surveillance Systems will be used infrequently. Usage will typically occur during situations of extreme stress where the full attention of the immediate area will most likely be devoted to the discrete law enforcement operations in progress. Potential interference will be confined to a very limited area and the duration of such interference would typically be very brief. The devices’ limited battery life of only about two hours further limits the likelihood of any on-going interference. Thus, in the unlikelihood that any interference even occurs, it would be extremely limited in time and space.

14. Available systems for surveillance require law enforcement personnel to get dangerously close to potentially hostile situations. Not only would a law enforcement officer’s life be put at risk, but an entire operation could be jeopardized with the loss of an officer’s life. In certain law enforcement or counter-terrorism operations this could then have life threatening repercussions for larger groups of people. The Petitioners’ Surveillance Systems, comprised of unique and innovative technology, provide a life-saving alternative. The important value of life is paramount to any transitory and temporary interference of Part 15 devices.

CONCLUSION

13. The Petitioners’ Surveillance Systems have all the characteristics requisite for waiver of the emission limit in 47 C.F.R. § 15.249(a), the emission type in 47 C.F.R. § 15.247(b)(3), and the spectral density requirement of 47 C.F.R. § 15.247(e) to permit the manufacture and sale of the device. It is essential that the Commission treat this request with expedited consideration, considering the potential for life saving applications and the ability to effectively counter various criminal and terrorist activities, including hostage taking and minimizing destruction that might occur in other standoffs.

WHEREFORE, Octatron, Inc. and Chang Industry, Inc. request that the FCC waive the application of 47 C.F.R. §§ 15.247(b)(3), 15.247(e), and 15.249(a) to the

⁵ *Northeast*, 897 F.2d at 1166.

⁶ Section 1, Communications Act of 1934, Purposes of the Act, 47 U.S.C. § 151.

devices and permit the devices to operate in analog mode with EIRP of up to 1 Watt in the frequency range 902-928 MHz.

Respectfully submitted,

**OCTATRON, INC. and
CHANG INDUSTRY, INC.**

November 28, 2005

By: _____



William Cook
Adrian B. Copiz
Alston & Bird LLP
601 Pennsylvania Avenue, N.W.
North Building, 10th Floor
Washington, DC 20004
202-756-3572

Counsel to Octatron, Inc. and
Chang Industry, Inc.